Contents

Letters to the Editor

An αΩ-model of the solar differential rotation Küker, M., Rüdiger, G., Kitchatinov, L.L.	L1	dimensional gravitational gas Muriel, A., Feix, M., Jirkovsky, L.	341
The period distribution of cataclysmic binaries evolving		Extragalactic astronomy	
without magnetic braking Kolb, U., de Kool, M.	L5	A study of the unusual starburst galaxy Markarian 603 (= NGC 1222)	
Lithium abundance in a few extremely metal-poor stars and strontium-poor stars Spite, F., Spite, M.	L9	Petrosian, A.R., Burenkov, A.N. A gravitational galactic wake in the M 81 group Donner, K.J., Thomasson, M.	2:
"Glitches" in soft X-ray transients: Echoes of the main burst? Augusteijn, T., Kuulkers, E., Shaham, J.	L13	A deep imaging survey of fields around quasars with z<1.2 Mg II absorption systems Le Brun, V., Bergeron, J., Boissé, P., Christian, C.	33
Magnetic fields and the cosmic ray e/p ratio. Clues from gamma-ray observations of the Magellanic Clouds Pohl, M. Further ROSAT measurements of the period of 4U	L17	Rapid X-ray variability in the I Zw 1 class object IRAS 13224 – 3809 Boller, T., Trümper, J., Molendi, S., Fink, H., Schaeidt, S., Caulet, A., Dennefeld, M.	5:
1820 – 30 van der Klis, M., Hasinger, G., Verbunt, F., van Paradijs, J., Belloni, T., Lewin, W.H.G.	L21	The extinction and star clusters in NGC 1275 Nørgaard-Nielsen, H.U., Goudfrooij, P., Jørgensen, H.E., Hansen, L.	6
Limits on mode identifications in rotating, non-radially pulsating stars Reid, A.H.N., Aerts, C.	L25	The intrinsic shape of early-type galaxies and the scatter around the fundamental plane Saglia, R.P., Bender, R., Dressler, A.	7
Evidence for siphon flows with shocks in solar magnetic flux tubes Degenhardt, D., Solanki, S.K., Montesinos, B.,		The milliarcsecond structure of the quasar 3C 279 Carrara, E.A., Abraham, Z., Unwin, S.C., Zensus, J.A.	8
Thomas, J.H.	L29	Dark matter in spiral galaxies and the Arimoto–Jablonka photometric model	
ROSAT-detection of a giant X-ray flare on LkHα 92 Preibisch, T., Zinnecker, H., Schmitt, J.H.M.M.	L33	Persic, M., Salucci, P., Ashman, K.M. Extragalactic jets driven by Alfvén waves	34
1.3 mm emission in the disk of NGC 891: evidence of cold dust		Gonçalves, D.R., Jatenco-Pereira, V., Opher, R. CO observations of a region of strongly polarized radio	35
Guélin, M., Zylka, R., Mezger, P.G., Haslam, C.G.T., Kreysa, E., Lemke, R., Sievers, A.W.	L37	continuum emission in the SW arms of M 31 Berkhuijsen, E.M., Bajaja, E., Beck, R.	35
CO in the "Black Eye" galaxy NGC 4826 Casoli, F., Gerin, M.	L41	High-resolution rotation curves of NGC 7626: dynamics of a young kinematically peculiar core	
Search for the $1.67 \mu m$ PAH emission band: more upper limits		Balcells, M., Carter, D. Dust in spiral galaxies. I	37
Siebenmorgen, R., Peletier, R.F.	L45	Chini, R., Krügel, E.	38
Erratum: (Letter) Large-scale extinction effects in the disk of S0 galaxies Michard, R., Simien, F.	335	The emission spectra of radioweak quasars. I. The far-infrared emission	
micros as, serios, a.	000	Niemeyer, M., Biermann, P.L.	39
Cosmology		Galactic structure and dynamics	
Upper bounds on the cosmological density of compact objects with sub-solar masses from the variability of QSOs		A model of the Galaxy for predicting star counts in the in- frared	
Schneider, P.	1	Ortiz, R., Lépine, J.R.D.	9

(RN) Time evolution of a density discontinuity in the one-

Formation, structure and evolution of stars		On the numerical calculation of hydrodynamic shock waves in atmospheres by an FCT method	
A study of three-dimensional turbulent compressible convection in a deep atmosphere at various Prandtl numbers		Schmitz, F., Fleck, B.	499
Singh, H.P., Chan, K.L.	107	Diffuse metter in space (including Hy regions and planetary	
Nonlinear models of first overtone mode Cepheids Antonello, E., Aikawa, T.	119	Diffuse matter in space (including HII regions and planetary nebulae)	
The asymmetry parameter M - m of the light curves of Cepheids in the Galaxy and Magellanic Clouds	105	Optical evidence for a poorly-collimated wind from Cepheus A	
Antonello, E.	125	Corcoran, D., Ray, T.P., Mundt, R.	206
Orbital elements of β Lyrae after the first 100 years of investigation Harmanec, P., Scholz, G.	131	HCN hyperfine anomalies in dark clouds González-Alfonso, E., Cernicharo, J.	506
UES and IUE observations of the O9.5 V star HD 93521: non-radial pulsations, wind, and distance		The correlations between planetary nebula morphology and central star evolution Stanghellini, L., Corradi, R.L.M., Schwarz, H.E.	521
Howarth, I.D., Reid, A.H.N.	148		341
Infrared photometry of the young stellar objects V 346 Normae and Re 13		NGC 2371: a high excitation planetary nebula with an O VI nucleus Kaler, J.B., Stanghellini, L., Shaw, R.A.	529
Prusti, T., Bontekoe, T.R., Chiar, J.E., Kester, D.J.M.,	162		34)
Whittet, D.C.B. The chemically peculiar star HD 37808	163	Morphological study of the extended halo around the Dumbbell Nebula (NGC 6853) Papamastorakis, J., Xilouris, K.M., Paleologou, E.V.	536
Leone, F., Catalano, F.A., Manfrè, M.	167	Submillimeter observations of the shocked molecular gas	000
The explosive thermonuclear formation of ⁷ Li revisited Boffin, H.M.J., Paulus, G., Arnould, M., Mowlavi, N.	173	associated with the supernova remnant IC 443 van Dishoeck, E.F., Jansen, D.J., Phillips, T.G.	541
The discovery and properties of the ultra-soft X-ray tran-		Abundances of non-type I planetary nebulae in the LMC	
sient EXO 1846-031	470	de Freitas Pacheco, J.A., Costa, R.D.D., Maciel, W.J.	567
Parmar, A.N., Angelini, L., Roche, P., White, N.E.	179	The intensity and state of polarization of light scattered in	
Study of the Population II Cepheid AU Pegasi Vinkó, J., Szabados, L., Szatmáry, K.	410	a spherical shell Bosma, P.B.	572
Non-linear, non-radial, isentropic oscillations of stars: third-order coupled-mode equations		The influence of ice-coated grains on protostellar spectra Preibisch, T., Ossenkopf, V., Yorke, H.W., Henning, T.	577
Van Hoolst, T., Smeyers, P.	417	Erratum: The correlations between planetary nebula mor-	
Transport of angular momentum and diffusion by the action of internal waves		phology and central star evolution Stanghellini, L., Corradi, R.L.M., Schwarz, H.E.	674
Schatzman, E.	431		
Stellar atmospheres		-	
Spectral analysis of LSE 78: an extreme helium star similar		The Sun	
to BD – 9° 4395 and DY Centauri Jeffery, C.S.	188	On the removal of the 180° sign ambiguity in vector magnetograph measurements: the divergence-free method	
Investigation of micro-flaring and secular and quasi-		$(V \cdot B \equiv 0)$	
periodic variations in dMe stars. VIII. Phase summation		Li, J., Cuperman, S., Semel, M.	214
techniques in spectroscopy of Gl 735 Andrews, A.D., Stanek, K.Z.	197	Random velocity field corrections to the f-mode. III. A photospheric random flow and chromospheric magnetic	
The application of Monte Carlo methods to the synthesis of early-time supernovae spectra		field Murawski, K., Goossens, M.	225
Mazzali, P.A., Lucy, L.B.	447	On the radio wave group delay in the solar corona for the	
On the synthesis of resonance lines in dynamical models of structured hot-star winds		case of decameter type III bursts Itkina, M.A., Levin, B.N., Tsybko, Y.G.	235
Puls, J., Owocki, S.P., Fullerton, A.W. The circumstellar gleam from the T Tauri star RY Lupi	457	Polarimetry and spectroscopy of a simple sunspot. II. On the height and temperature dependence of the magnetic	
Gahm, G.F., Liseau, R., Gullbring, E., Hartstein, D.	477	field Belshager H. Schmids W.	242
Observations of stellar winds in high-mass X-ray binaries:		Balthasar, H., Schmidt, W.	243
evidence for a non-monotonic velocity structure Kaper, L., Hammerschlag-Hensberge, G.,	40.6	Current-sheet formation in two-dimensional coronal fields	
van Loon J.T.	485	Billinghurst, M.N., Craig, I.J.D., Sneyd, A.D.	589

Dynamics of the solar granulation. II. A quantitative approach Nesis, A., Hanslmeier, A., Hammer, R., Komm, R.,		Redshifts of southern rich clusters Galli, M., Cappi, A., Focardi, P., Gregorini, L., Vettolani, G.	336
Mattig, W., Staiger, J. Some regularities of velocity oscillations in prominences	599	Optical photometry of carbon stars Groenewegen, M.A.T., de Jong, T.	336
Bashkirtsev, V.S., Mashnich, G.P. The solar system	610	Table of the Lyman band system of molecular hydrogen Abgrall, H., Roueff, E., Launay, F., Roncin, JY., Subtil, JL.	336
On the evolution of binary Earth-approaching asteroids Farinella, P., Chawineau, B.	251	Table of the Werner band system of molecular hydrogen Abgrall, H., Roueff, E., Launay, F., Roncin, JY.,	
The ion population between 1300 km and 230 000 km in the coma of comet P/Halley Altwegg, K., Balsiger, H., Geiss, J., Goldstein, R.,		Subtil, JL. Near-infrared images of IRAS galaxies Zenner, S., Lenzen, R.	337337
Ip, WH., Meier, A., Neugebauer, M., Rosenbauer, H., Shelley, E.	260	Two intermediate age open clusters: NGC 752 and NGC 3680	227
Atmospheric fragmentation of meteoroids Ceplecha, Z., Spurný, P., Borovička, J., Kecliková, J.	615	Carraro, G., Bertelli, G., Bressan, A., Chiosi, C. Spectrophotometry of peculiar B and A stars. XIX. Vari-	337
A fireball spectrum analysis Borovička, J.	627	ability of the magnetic CP stars Adelman, S.J., Pyper, D.M.	337
Cometary dust trails and meteor storms Kresák, Ľ.	646	Intensity of CaH lines in cool dwarfs Barbuy, B., Schiavon, R.P., Gregorio-Hetem, J., Singh, P.D., Batalha, C.	338
CO in the troposphere of Neptune: detection of the $J=1-0$ line in absorption Guilloteau, S., Dutrey, A., Marten, A., Gautier, D.	661	Grids of stellar models. III. From 0.8 to 120 M_{\odot} at Z = 0.004 Charbonnel, C., Meynet, G., Maeder, A., Schaller, G.,	220
Celestial mechanics and astrometry		Schaerer, D.	338
Hipparcos link with Carte du Ciel triple images Dick, W.R., Tucholke, HJ., Brosche, P., Galas, R.,		Simultaneous wbyβ photometry of GP Andromedae Rodríguez, E., Rolland, A., López de Coca, P. Padio galaxies of intermediate strength, II. VI. A. observa-	338
Geffert, M., Guibert, J. On the hierarchy of relativistic kinematically nonrotating	267	Radio galaxies of intermediate strength. II. VLA observa- tions Bondi, M., Gregorini, L., Padrielli, L., Parma, P.	338
reference systems Klioner, S.A.	273	The spectral characteristics of the RATAN-600 RC-catalog sources	
Physical and chemical processes		Bursov, N.N., Chepurnov, A.V., Lipovka, N.M., Soboleva, N.S., Temirova, A.V.	675
Anomalous diffusion of cosmic rays across the magnetic field	270	Spectroscopic observations of the galaxy cluster A 3571 (SC 1344-325)	
Chuvilgin, L.G., Ptuskin, V.S.	278	Quintana, H., de Souza, R.	675
Atomic data from the IRON Project. I. Goals and methods Hummer, D.G., Berrington, K.A., Eissner, W.,		COYOTES I. Multisite <i>UBVRI</i> photometry of 24 premain-sequence stars of the Taurus-Auriga cloud <i>Bouvier, J., Cabrit, S., Fernández, M., Martín, E.L.</i> ,	
Pradhan, A.K., Saraph, H.E., Tully, J.A.	298	Matthews, J.M. Physical studies of asteroids. XXVI. Rotation periods and	675
Instruments, data processing, and computational methods An astronomical seismometer		photoelectric photometry of asteroids 323, 350, 582, 1021 and 1866	
Frandsen, S., Douglas, N.G., Butcher, H.R.	310	Schober, H.J., Erikson, A., Hahn, G., Lagerkvist, CI.	676
Interferometric imaging with arrays of large optical telescopes in the multi-speckle mode	222	Physical studies of asteroids XXVII. Photoelectric photometry of asteroids 14 Irene, 54 Alexandra and 56 Melete	
Reinheimer, T., Hofmann, KH., Weigelt, G. Series inversion of Abel equation for very peaked profiles: the $R^{1/4}$ -law	322	Belskaya, I.N., Dovgopol, A.N., Erikson, A., Lagerkvist, CI., Oja, T.	676
Bendinelli, O., Ciotti, L., Parmeggiani, G.	668	Near-infrared and sub-millimeter photometry of carbon stars	
Abstracts of articles which have been published in		Groenewegen, M.A.T., de Jong, T., Baas, F.	676
A. & A. Suppl. Ser. 101, No. 3New BV light curves and photometric solutions for the		Optical spectroscopy of 1 Jy, S4 and S5 radio sources. IV Stickel, M., Kühr, H.	676
contact binary SS Arietis Qingyao Liu, Yulan Yang, Chenghong Gu, Bi Wang	336	Faint halos around compact planetary nebulae Hua, C.T., Grundseth, B., Maucherat, AJ.	676

3

Optical polarization of 1000 stars within 50 pc of the Sun Leroy, J.L.	677	Stark broadening of spectral lines of multicharged ions of astrophysical interest. IX. F vII lines Dimitrijević, M.S., Sahal-Bréchot, S.	f 677
Four-colour photometry of eclipsing binaries. XXXV. Light curves of GG Lupi: Young metal-deficient B stars Clausen, J.V., Garcia, J.M., Giménez, A., Helt, B.E., Vaz, L.P.R.	677	An atlas of Balmer lines (Hδ and Hγ) Cananzi, K., Augarde, R., Lequeux, J. Spots on (4) Vesta and (7) Iris: large areas or little patches?	678
Observations and ephemeris of Saturn between 1970 and 1978 (Text in French) Sanchez, M., Débarbat, S., Chollet, F.	677	Hoffmann, M., Geyer, E.H. A spectral atlas of the Herbig Ae star AB Aurigae. The visible domain from 391 to 874 nm	678
Studies of early-type variable stars. X. Reticon-based radial velocities of β Persei Hill, G., Perry, C.L., Khalesseh, B.	677	Böhm, T., Catala, C.	678
Stark broadening of Bi II lines of astrophysical interest Dimitrijević, M.S., Popović, L.Č	677	Papers accepted for publication in A. & A.	339

